FOR IMMEDIATE RELEASE MAY 24, 1972

PRESS CONFERENCE
OF
THE VICE PRESIDENT;
DR. JAMES C. FLETCHER, ADMINISTRATOR, NASA;
GLYNN S. LUNNEY, ASSISTANT TO THE MANAGER FOR OPERATIONAL, EXPERIMENT AND GOVERNMENT FURNISHED EQUIPMENT, NASA;
AND
DR. EDWARD E. DAVID, JR.,
SCIENCE ADVISOR TO THE PRESIDENT

THE VICE PRESIDENT: Please be seated.

Today the President signed, with Premier Kosygin of the Soviet Union, some important agreements concerning our space program and their space program. Discussions on this subject have been under way since the fall of 1970 and one of the most interesting of these agreements concerns itself with a joint docking mission, a rendezvous and docking mission which is scheduled to take place in 1975.

These matters of the peaceful use and exploration of outer space are extremely critical to both our nations and we have here with us today, in addition to General McDivitt, Dr. Fletcher, the Administrator of NASA, who will brief you thoroughly on these matters and then answer your questions.

Jim.

DR. FLETCHER: Thank you, Mr. Vice President.

I do have here with me, as the Vice President mentioned, General Jim McDivitt, who is an astronaut and former project manager for the APOLLO program and I also have with me Glynn Lunney, who is the Program Director for the international rendezvous and docking mission.

We, needless to say, are very pleased that the President has been able to meet with the officials of the Soviet Union and to provide what we think is by far the most meaningful cooperation in space achieved ever by these two nations.

We have been discussing the possibilities of cooperation of this sort for some years, particularly intensively for the last two years and as the President has announced, we have jointly agreed to firm many of these tentative commitments into a definitized program and have begun to set up a timetable with the Soviet Union for carrying out some of these events.

Perhaps the most dramatic of these events will be a rendezvous and docking of the APOLLO command service module. This is the same module that orbits the moon when the limb descends to the moon and returns. This module then is used to return the astronauts back to earth. The vehicle we will be docking with will be the Soyuz spacecraft, which is the primary manned spacecraft used by the Soviet Union.

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These two vehicles at the present time are not compatible. They are not compatible because they don't have the docking mechanism. They are not compatible because they have different atmospheres. Theirs is a normal atmosphere, ours is a low pressure oxygen, almost pure oxygen atmosphere and there are certain communications and electronics incompatibilities.

In order to make these compatible, we found that the U.S. had to construct what we call a docking module, which is this little device that sits in between the two and the docked device will look something like this. The sequence will be first we will launch on a Saturn 1B, which is an older version of the Saturn missile, both the command service module and the docking adaptor. Then we will make a maneuver at 100 miles or so altitude, much the same as we do with the lunar excursion model, go in and pick out the docking adaptor from the Saturn and then continue on in orbit.

Meanwhile, the Soviets will launch their Soyuz spacecraft and rendezvous or at least move their altitude to something like 150 miles. We won't be at the same altitude, but hopefully we will be far enough north so too much maneuvering will not be required.

We will then have to perform the rendezvous mission which will be primarily carried out, I suspect, with the equipment developed in the United States. This is guidance and instrumentation designed to bring these two close together, And then they will dock with a new kind of a docking mechanism we call androgynous, because it doesn't consist of a prop and a drogue, a point and a whole. It is an inverse docking mechanism so they can dock with us or we can dock with them either way. It is a universal docking system which Glynn Lunney may want to show you afterwards which will apply not only to this particular docking mission, but all succeeding spacecraft that we develop and presumably the Soviets develop, so that we do have the capability, over a long period, of rendezvousing and docking with each other's spacecraft.

You may wonder why we would proceed that way. There has been concern for many years that we did not have a rescue capability in case something went wrong in space, that we each would have the option of rescuing the other. Future spacecraft beyond 1975, which is the planned date for this mission, will all have the capability.

There are some fringe benefits from this program. It does have the impact of requiring 4,400 people to be employed that would not otherwise be employed, primarily from the aerospace industry, partly to prepare the command service model and the Saturn 1B launch device, but also to construct the new docking adaptor.

In addition to that, it will keep the APOLLO team together, which, as you know, has done rather spectacularly well over the last several years, keep it together on through 1975 in preparation for the first launch of the shuttle which occurs in 1978.

It will have the major impact in employment in the aerospace industry.

It will also have the implied commitment that missions of this sort will continue in the future and, if we are successful, we can avoid duplication between the Soviet Union and ourselves in their carrying out one aspect of a program and we carrying out another and presumably both countries will be much more efficient thereby.

All of us at NASA are very optimistic this new cooperative effort in the exploration of space may lead to greatly increased cooperation on still other programs. In my mind it will be the most visible, Soviet used cooperative effort of any kind in history since it will involve cosmonauts and astronauts working together on a very complex mission in space while the whole world is watching, presumably on television via satellite relay.

Thank you very much.

Now we have Mr. Lunney and General McDivitt and Dr. David, all whom are capable of answering questions or I will be glad to field them myself.

Q Dr. Fletcher, could you answer one question. You said the Soyuz and APOLLO will come together. I thought there was a Salyut in between.

DR. FLETCHER: There is no Salyut involved in this mission. This is an APOLLO CSM with a Soyuz with a docking adaptor in between.

Q That is a rather recent change, isn't it, the elimination of the Salyut?

DR. FLETCHER: Yes. Several months ago we had the thought that after the Soviets had launched their first Salyut we would try to rendezvous with their Salyut. In fact, they made the suggestion, but they went back to the drawing boards and they found that was a very complicated mission because it involved not just the two launches, their Soyuz and our APOLLO, but a third of their Salyuts. So that is three separate launches that had to be coordinated.

Their Salyut then would have had to dock with their own spacecraft, their Soyuz, plus our own, so it would have had two docking mechanisms and then the electronics began to get more and more complicated. This seemed like the first thing to try.

Q How can you work together? There is not much room in the Soyuz and the APOLLO for six men.

DR. FLETCHER: It is not clear that it will be six men. It is quite possible we will only use four, two in each. It is likely -- we have not worked out the mission details -- but it is likely two men will move from the APOLLO CSM into the adaptor, wait for the pressure to be equalized and then move on into the Soyuz.

STATEMENT BY DR. FLETCHER

5/24/72

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We of the National Aeronautics and Space Administration are extremely pleased that President Nixon's meeting with officials of the Soviet Union in Moscow has brought to fruition the most meaningful cooperation in space yet achieved by our two nations.

We have been discussing the possibilities of such cooperation for some time now, and some important technical agreements had been reached earlier. Now, as President Nixon has announced, we have jointly agreed to firm these commitments into a definitized program and have begun to set up the timetable for various cooperative events to take place.

The most dramatic of these events will involve the rendezvous and docking of a U. S. spacecraft with a Russian Soyuz spacecraft in 1975. It will be an earth orbital mission. A U. S. command-and-service module of the type we are now using in our Apollo moon missions will link up with a Soviet Soyuz spacecraft. While two spacecraft are docked together the astronauts and cosmonauts will visit both spacecraft and perform a number of simple scientific tasks.

Let me describe briefly a few of the details of the joint mission. Our Apollo spacecraft will be fitted with a new system referred to as the docking module. It will be launched from Cape Kennedy on a Saturn IB into low earth orbit -- about 110 nautical miles. After it separates from the second Saturn stage, the command and service module will turn around, dock and extract the docking module in much the same way the lunar module is extracted from the second Saturn stage on a moon mission. The plane of the orbit will be inclined 51.6° to the equator, in order to pass over the USSR launch site.

Soon after the Apollo launch, the Soyuz spacecraft would be launched into an orbit of about 145 nautical miles. Once this has been attained, the Apollo would begin an active rendezvous sequence designed to bring the two craft close together. The Apollo radio and optical guidance systems would be used to rendezvous. At the time of station keeping, the Apollo spacecraft would be maneuvered to dock with the Soyuz, using a new TV docking alignment system and the compatible docking system.

Once locked together, it is expected that American astronauts would visit the Soyuz first; they would enter

through the docking module, carrying voice communications equipment and an additional television camera. After this, an American astronaut would accompany a Soviet cosmonaut back to the Apollo.

In preparation for this event and other cooperative endeavors to follow, NASA will begin the manufacture of the docking module this summer. A task group of engineers from our two countries has already met several times to discuss the technical problems involved; another meeting will be held in the very near future.

It will take two years to build and test the docking module. We are pleased that as part of the cooperative effort there will be Soviet engineers working side-by-side with our own NASA people, probably in both countries.

The joint manned flight program will also bring many immediate and direct economic benefits to the people of the United States. First, the project will bring employment to thousands of aerospace workers to build, test or modify hardware necessary for the flight. This employment will reach a peak of about 4400 by the end of 1974.

In addition, thousands of other workers employed to support test, checkout and launch activities are now assured of jobs through the launch and flight of the joint mission.

Beyond this, the agreement to carry out a joint mission assures the retention of the Apollo team, a unique technical and management resource, for work on the Space Shuttle and other important future programs.

It is our hope that this first mission is the precursor of future joint manned and unmanned efforts which will enable both nations to avoid duplication and reduce the costs of space exploration.

Such cooperative programs will enable both countries to better serve all mankind with continued vigorous efforts to expand our understanding of science and development of new technology for better life on earth.

All of us are quite optimistic that this new deeper cooperation in the exploration of space may lead to increased cooperation on still other programs. It will probably be the most visible Soviet-U.S. cooperative effort in history, since it may involve cosmonauts and astronauts working together on a very complex mission while the whole world is observing on television via satellite relay.